PULSE C
WEEKLY REPORT ON SCIENCE AND MEDICINE

Taking a step toward INDEPENDENCE

Parastep electronically stimulates lower body muscles enabling some people with spinal cord injuries to stand and walk short distances at home.

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For the Courier-Post

Photos by Avi Steinhardt, Courier-Post

Trying to bounce back: With help from Magee Rehabilitation Hospital director of physical therapy Mary Schmidt (left) and spinal cord injury specialist Margie Roos, John Schneider tries new electrical stimulation program called Parastep. John's family insurer hasn't yet approved coverage of the $15,990 program, but the teen is hopeful. 'My goal is to walk for graduation (in June),' he said.

John Schneider lost something irreplaceable the last time he climbed into the back of a pick-up truck and cruised through town with his buddies.

When the truck slammed into a telephone pole at 60 miles an hour, 17-year-old John's spinal cord was instantly severed and he lost the ability to walk, and to a certain extent, his independence and freedom.

Later that night last May, John told his parents he was paralyzed, and doctors quickly confirmed that he would never walk again. The co-captain of the Deptford High School football team now faced life from the seat of a wheelchair.

"I don't like my freedom taken away from me," says the teen, sitting in his family's Deptford home. "Your life is taken away from you, and you have to start all over again."

But what John hasn't lost is his determination. He now hopes he can improve his mobility and strengthen his leg muscles with the aid of a new electrical stimulation program called Parastep being offered by Magee Rehabilitation Hospital in Philadelphia.

Approved by the Food and Drug Administration in April, Parastep may eventually enable people with certain spinal cord injuries to stand and walk.

Right now, Parastep is being used to help patients walk short distances at home, receive the benefits of exercise, and feel better about themselves.

Shows promise

"Electrical stimulation holds a lot of promise for spinal cord injury," says Cynthia Kraft-Fine, director of Magee's spinal cord injury program. "The fact that we can see one of our test patients actually walk, using her own body to do so, is amazing. I never thought we would be at this point so soon."

Parastep works by placing electrodes on leg muscles. Patients wear a hip-pack containing a microcomputer that controls the system. While holding onto a walker for balance, the patient pushes control buttons on the walker to send electronic impulses to leg muscles that force their legs to move.

Parastep is designed for people who have been injured in the middle of the back and who have not lost the control of their hands. Patients also must be physically fit to withstand the stress of electrical stimulation.

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